



## Options on Economic Data

On October 1, 2002, Goldman Sachs and Deutsche Bank began auctioning options on economic news releases. The first auction was for options on the September U.S. nonfarm payrolls report, released October 4, while later contracts will include U.S. retail sales, gross domestic product, measures of consumer confidence, inflation, and German data.

A call (put) option confers the right, but not the obligation, to buy (sell) an asset at a given time in the future for a given price, called the strike price or exercise price. For instance, a call option with strike price of 100 on September nonfarm payroll growth garners \$1 per thousand jobs created in excess of 100,000. That is, if nonfarm payroll growth is announced to be 135,000, the buyer of such a call would receive \$35 for each unit purchased. If the September nonfarm payroll change is less than 100,000, the buyer of the call option receives nothing and loses the initial investment. (Only the initial announcement determines the payoff.) Therefore the potential loss in buying an option is limited to the price of the option, but the potential payoff is much greater.

Goldman Sachs and Deutsche Bank match buyers and sellers with a double Dutch auction in which prices are determined by the lowest successful bid and all winning bidders pay the same price for the option. Higher bidders, however, have first claim on larger quantities of the option.

The seller of the option is obligated to pay the buyer if the option ends up “in-the-money”—having a positive payout. For regulatory reasons and to reduce the risk that options sellers might default on their obligation to the buyers, only institutional investors and hedge funds may participate in the auctions and Goldman Sachs and/or Deutsche Bank will be the official counterparties to the buyers.

What economic good do these options on economic statistics provide? They permit firms and individuals to hedge risk, to reduce the danger that bad (or good) economic statistics will reduce their profit/wealth. For example, a construction firm might buy a put option on housing starts to hedge its risk against a slowdown in the industry. If announced housing starts are less than the “strike price” of the firm’s put option, the firm will receive a payment that will make up for the reduced revenue that accompanies fewer housing starts. Similarly, a cruise line might hedge itself against a downturn in travel by using options on consumer confidence.

These options not only allow firms and individuals to share the risk of uncertain economic outcomes, they also provide publicly available information about the likelihood of these outcomes. In other words, the options prices could help forecast the distribution of the economic statistics. For example, the difference between the prices of call options on September payroll growth with strike prices of 100 and 120 might be used to predict how likely it is that employment growth will be between 100,000 and 120,000. Because such forecasts are generated by firms “putting their money where their mouth is,” they might be more accurate than free forecasts. If this market succeeds, such implied forecasts might help both private decisionmakers and policymakers. A Goldman Sachs press release reports that the October 1 auction implicitly predicted a drop of 38,000 in the September nonfarm payrolls. The October 3 auction predicted a drop of 18,000 jobs. In fact, the actual decline was 43,000. Thus, both predictions from the options market bested the consensus forecast of +20,000 published on September 30 in the *Wall Street Journal*. Only time will tell if such good predictions from the economic derivatives market are the exception or the rule.

—Christopher J. Neely

